

## PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 02003011	<b>FOR FURTHER ACTION</b> See Form PCT/IPEA/416	
International application No. PCT/FI 2004/000164	International filing date (day/month/year) 24-03-2004	Priority date (day/month/year) 25-03-2003
International Patent Classification (IPC) or national classification and IPC A61C1/00 // G06F3/033		
Applicant Planmeca Oy et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
  - a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:
    - ☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
    - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
  - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input checked="" type="checkbox"/> | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

Date of submission of the demand 18-10-2004	Date of completion of this report 11-05-2005
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# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI 2004/000164

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3 and 23.1(b))

☐ publication of the international application (under Rule 12.4)

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☐ the description:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the claims:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ the drawings:

pages \_\_\_\_\_ as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages \_\_\_\_\_

☐ the claims, Nos. \_\_\_\_\_

☐ the drawings, sheets/figs \_\_\_\_\_

☐ the sequence listing (*specify*): \_\_\_\_\_

☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	<u>6-8, 10-11</u>	YES
	Claims	<u>1-5, 9, 12</u>	NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-12</u>	NO
Industrial applicability (IA)	Claims	<u>1-12</u>	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

## Prior art

Reference is made to the following documents:

D1:US 5300926 A  
D2:EP 1010404 A2  
D3:US 5550564 A1  
D4:US 2001/0002725 A1

Document D1 discloses a dental apparatus which comprises a dental device, such as an instrument table, a graphic display and a user interface which can be a touch pad. The user interface is arranged to control the functions of the dental device in response to a touch on the touch pad. The graphic display comprises means for showing symbols describing the control functions of the dental device. (See for example the abstract, column 7, line 3-11, column 8, line 20-30 and line 47-60 and figures 1, 7, 8.)

Document D2 discloses a dental apparatus which comprises a dental device, for example an instrument table, a graphic display and a user interface which can be a touch pad. The user interface is arranged to be used for controlling functions of the dental device. The graphic display comprises means for controlling the dental devices. The information on the graphic display can be controlled in response to a touch on the touch pad. The dental apparatus is connected to a computer, which computer contains relevant information about the patient, such as previous treatments etc. (See for example

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of: Box V

the abstract, paragraph [0006], [0008], [0012], column 4, line 2-7 and figures 1-2.)

It is known from document D3 a cleaning mechanism for sanitising a contaminated and soiled touch screen display. The mechanism consists of a transparent film which is rolled over the touch screen, a source roll of transparent film and a take-up roller which rolls up the used film. When the film over the touch screen is soiled, that piece of film is rolled up and new, clean film is placed over the touch screen. (See for example the abstract, column 1, line 25-46, column 2, line 4-18 and figure 1.)

From document D4 it is known that a control panel disclosing a surface pad can be covered by a protective plastic foil to maintain a clean and hygienic surface. The plastic foil is of a multilayer material, where the layers are adhered to each other. When the surface becomes dirty, the topmost layer is removed by hand from the underlying fresh layer. (See for example the abstract, paragraph [0020]-[0021] and figure 4.)

## Statement of reason

The invention according to claims 1-12 discloses a dental apparatus and a method for controlling a dental apparatus, which discloses a dental device such as an instrument table, a graphic display comprising means for showing symbols describing the control functions of the dental device and a user interface, which interface is arranged to be used for controlling functions of the dental device. The user interface is a touch pad and in response to a touch of a pointer means a cursor is controlled. There are problems with cleaning and disinfection of typical controllers such as a mouse or a keyboard. A touch pad is much easier to clean than a typical keyboard. In a preferred embodiment of the invention a detachable and disinfectable or disposable film is arranged to be attached to the surface of the touch pad, to improve the possibility to clean and disinfect the touch pad.

The apparatus known from D1 is considered to represent the closest prior art.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

It is assumed as obvious that the graphic display can show a cursor and that the cursor can be controlled in response to a pointer means movements on the surface of a touch pad. Therefore, according to what is known from D1 the invention according to claims 1-5,9,12 lacks novelty.

Also, according to what is known from D2 the invention according to claims 1-5,9,12 lacks novelty.

What is mentioned in claims 6-7 is regarded as constructional and technical details concerning the touch-pad, which are obvious to a person skilled in the art. Also, these details do not solve the problem concerning the cleaning and disinfection of the touch pad. Therefore, the invention according to claims 6-7 is regarded to lack an inventive step according to what is known from D1 or D2.

What is mentioned in claim 10 is regarded as a constructional detail concerning the placement of the touch pad. Also, this detail does not solve the problem concerning the cleaning and disinfection of the touch pad. Therefore, the invention according to claim 10 is regarded to lack an inventive step according to what is known from D1 or D2.

What is mentioned in claim 11 is regarded as an obvious detail to a person skilled in the art. Especially the computer in D2, which is connected to the dental apparatus, contains data about the patient and is capable of for example displaying previous treatments. It is obvious to arrange the control information to be modified on the basis of the patient information included in the computer. Also, this detail does not solve the problem concerning the cleaning and disinfection of the touch pad. Therefore the invention according to claim 11 is regarded to lack an inventive step according to what is known from D1 or, especially, D2.

The invention according to claim 8 differs from what is mentioned in D1 only in that there is a detachable and disinfected or disposable film attached to the touch pad.

Dentists often want to clean the user interface of the computer device, so that the risk of contamination during a

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of: Box V

dental examination is reduced. There is a problem that user interfaces, for example touch pads, get dirty and contaminated.

The person skilled in the art, facing the problem mentioned above, would find a solution in D3 and D4. D3 teaches the person skilled in the art to arrange a transparent film on a users interface, such as a touch screen, so that the film comes into contact with the touch screen. For sanitary reasons this film is detachable and it is possible to maintain a clean surface of the touch screen. It is regarded as obvious to the person skilled in the art that this film also can be arranged to be disinfectable or disposable. Also, D4 teaches the person skilled in the art that a control panel disclosing a surface pad can be covered by a protective plastic foil to maintain a clean and hygienic surface. When the surface becomes dirty, the disposable topmost layer of the plastic foil is detached by hand and reveals a new fresh layer of the foil.

The person skilled in the art, having the apparatus from D1 as a starting point, aiming to solve the identified problem, would with the information from D3 and D4 arrange a detachable foil over the touch pad in D1.

No unexpected technical effect is obtained by the combination of D1, D3 and D4. Consequently, what is mentioned in claim 8 is thus not regarded to involve an inventive step.

The above argument is also valid when the person skilled in the art has the apparatus known from D2 as a starting point.

Consequently, the invention according to claims 1-5, 9 and 12 lacks novelty. The invention according to claims 6-8, 10 and 11 is novel but lacks an inventive step. The invention according to claims 1-12 is industrially applicable.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

According to PCT Rule 6.2(b) the technical features mentioned in the claims shall preferably be followed by the reference signs relating to such features. The reference signs shall preferably be placed between parentheses.